

## REFRESH - SHIP ENERGY EFFICIENCY MANAGEMENT PLAN

**V.Delta** is currently involved into a research project funded by the European Commission, REFRESH - Green Retrofitting of Existing Ships.

This is a 3-year prestigious project which involves 19 members from various sectors of shipping including ship operators, shipyards, classification societies, universities, R&D institutions, local authorities, associations and consultants.

REFRESH's focus is on energy efficiency of existing vessels and its 3M€ funding is used for investigating energy deficiencies and retrofitting solutions.

The project is linked with the implementation and effectiveness of the Ship Energy Efficiency Management Plan (SEEMP), encompassing initiatives designed to maximize energy efficiency during in-service operations and its specific objectives are as follows:

- Developing dynamic energy modelling routines**
- Optimizing energy efficiency and air emissions for retrofitting and operation**
- Developing a monitoring methodology for operation**
- Produce a new-concept decision support tool for operation, based on both energy models and live data from the vessel.**

Special focus is being given to ferries, bulk carriers and tankers. Two ships for each type were energy audited and studied since 2012, allowing creating energy models for on-board systems and evaluating benefit and costs related to all identified energy saving solutions.

By the end of 2014 a ROPAX vessel operating in the Mediterranean is scheduled to be fitted with a new-concept decision support tool. Its innovation lies in the coexistence of both statistical and physical energy models, targeting to allow capability for enhanced monitoring and in-office accurate simulations of potential retrofitting's impact.

Upon the completion of the project in 2015, REFRESH will be able to provide the knowledge and tools to enable ship owners and other key industry stakeholders to respond cost effectively to the environmental legislation

### PROJECT FACTS:

- Ship Type:** Generic
- Job:** Investigate energy deficiencies and retrofitting solutions
- Duration:** 3 years
- Partner Companies:** 19



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